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SIXTY-SIXTH ANNUAL REPORT
OF
THE TRUSTEES
OF THE
WORCESTER LUNATIC HOSPITAL,
AND
TWENTY-FIRST ANNUAL REPORT OF THE TRUSTEES
OF THE
WORCESTER INSANE ASYLUM AT WORCESTER,
FOR THE
YEAR ENDING SEPTEMBER 30, 1898.

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Commonwealth of Massachusetts.

TRUSTEES' REPORT.

To His Excellency the Governor and the Honorable Council.

The trustees of the Worcester Lunatic Hospital respectfully submit their sixty-sixth annual report, together with the reports of the superintendent and the treasurer, and the statistical tables, showing in detail the affairs of this institution.

The Board has visited the hospital once a month as required, and its individual members have made frequent and unannounced visits at other times. They have examined all parts of the house thoroughly, inspected the food as to its quality and quantity, and seen the methods used in its preparation and distribution; they have gone through the wards and listened patiently to any and all complaints made by patients; and they have carefully examined the accounts and disbursements of the institution, and made themselves familiar with the condition of its finances. They have at all times been impressed with the orderliness and cleanliness of the wards, with the individual care given the patients, and the constant effort that is being made to employ and interest them.

They have noticed with special interest the progressive spirit animating the medical department and the high character and great value of the work done in the laboratory.

The infirmary wards, provided for by an appropriation of the Legislature of 1896, are practically completed and will soon be occupied. The trustees feel that the site for these wards was most happily chosen, and that they have been so constructed as to in no way detract from the symmetry of the building architecturally. Facing the south and open on three sides, they are light, airy and full of sun through the day. The general arrangement of their interior is certainly pleasing and con-

venient, and they should form a valuable addition to the equipment of the hospital, and will no doubt be appreciated by the patients for whose comfort they were designed.

During the summer the heating plant of the institution has been overhauled and new boilers installed to replace old ones that had been in use since the opening of the building. A new kitchen has also been completed. All of this work, although done rapidly from necessity, is thorough and substantial in every respect. Both buildings have been erected within the appropriation made by the Legislature for this purpose. The extension provided for in the rear of the centre building, for the employees and patients' work room, will soon be begun. When this is finished and a nurses' home provided for, the institution will be well equipped in the way of buildings; and the trustees see no reason why they should be obliged to again call upon the State for assistance for many years to come.

The Board has lost during the year, by resignation, two members who have long been actively identified with its interests and the interests of the institution under its charge, — Francis C. Lowell and Henry C. Nourse. We shall miss their valued counsel and assistance, and we regret that the new positions of trust to which they have been called made their resignation from this Board necessary.

Respectfully submitted,

A. GEORGE BULLOCK.
THOMAS H. GAGE.
GEORGE W. WELLS.
ROCKWOOD HOAR.
DAVID T. DICKINSON.
SARAH E. WHITIN.
FRANCES M. LINCOLN.

WORCESTER, Sept. 30, 1898.

VALUE OF PERSONAL ESTATE.

SEPT. 30, 1898.

Live stock on the farm,	\$9,775 00
Produce of the farm on hand,	10,000 00
Carriages and agricultural implements,	6,450 00
Machinery and mechanical fixtures,	29,509 33
Beds and bedding in inmates' department,	29,280 32
Other furniture in inmates' department,	22,481 82
Personal property belonging to the State in superintendent's department,	26,922 42
Ready-made clothing,	1,659 20
Dry goods,	792 55
Provisions and groceries,	3,967 81
Drugs and medicine,	900 00
Fuel,	1,406 50
Library,	4,500 00
Other supplies undistributed,	5,276 39
Pipes and radiators,	39,700 00
Total,	<hr style="width: 20%; margin: 0 auto;"/> \$192,621 34

TREASURER'S REPORT.

To the Trustees of the Worcester Lunatic Hospital.

I herewith submit my annual report on the finances of the Worcester Lunatic Hospital for the year ending Sept. 30, 1898 :—

RECEIPTS.

Cash on hand Sept. 30, 1897,	\$44,031 90
Received of the Commonwealth for support of patients, . . .	37,278 75
of cities and towns for support of patients, . . .	86,399 08
of individuals for support of patients, . . .	43,099 90
for interest, sale of produce, etc., . . .	5,601 63
belonging to patients,	2,560 66
	<hr/>
	\$218,971 92

The expenditures for the year have been as follows :—

Salaries and wages,	\$61,585 99
Provisions and supplies, viz.:—	
Meat of all kinds,	\$13,177 22
Fish of all kinds,	3,041 79
Fruit and vegetables,	5,502 62
Flour,	6,807 50
Grain and meal for table,	627 68
Grain and meal for stock,	4,512 31
Tea, coffee and chocolate,	2,052 68
Sugar and molasses,	4,341 38
Butter and cheese,	8,884 51
Salt and other groceries,	4,484 80
All other provisions,	860 49
Total for provisions and supplies, . . .	<hr/> 54,292 98
Clothing,	\$8,756 65
Fuel,	8,077 53
Lights,	4,140 60
Water,	3,005 09
Medicine and medical supplies,	1,575 96
Furniture, beds and bedding,	4,148 77
Transportation,	254 96
	<hr/>
<i>Amounts carried forward,</i>	\$29,959 56
	<hr/> \$115,878 97

<i>Amounts brought forward,</i>	\$29,959 56	\$115,878 97
Ordinary repairs,	8,856 55	
Trustees' expenses,	41 84	
Pathological department,	1,151 82	
All other current expenses,	12,833 11	
	<hr/>	52,842 88
Total current expenses,		\$168,721 85

Extraordinary expenses:—

Water sections,	\$8,012 88	
Sewer and water connections to new infirmary wards,	2,201 32	
House telephone system,	2,122 08	
Fire-proof vault,	3,769 19	
Silo,	294 43	
Lawn fund,	1,500 00	
Boilers and setting same,	2,398 06	
Tramway,	1,033 12	
	<hr/>	\$21,331 08
Undertaking,	\$308 40	
Cash refunded,	23 29	
Cash refunded patients (on deposits),	3,272 97	
	<hr/>	3,604 66
Total extraordinary expenses,		24,935 74
		<hr/>
		\$193,657 59
Cash on hand Sept. 30, 1898,		25,314 33
		<hr/>
		\$218,971 92

RESOURCES.

Cash on hand,	\$25,314 33
Due from the Commonwealth for board, etc.,	9,176 60
from cities and towns for board, etc.,	21,328 98
from individuals,	13,036 67
	<hr/>
	\$68,856 58

LIABILITIES.

Due for supplies and improvements,	\$8,658 17
for salaries and wages,	5,277 73
to patients (on deposits),	1,205 69
	<hr/>
	15,141 59
	<hr/>
	\$53,714 99

Respectfully submitted,

ALBERT WOOD,

Treasurer.

SPECIAL APPROPRIATIONS.

	Appropriations.	Amount Expended.	Balance Oct. 1, 1898.
For construction in new infirmary wards,	\$80,000 00	\$57,870 90	\$22,129 10
New boiler house and boilers, .	11,000 00	11,000 00	—
Construction of new kitchen, .	18,000 00	8,409 91	9,590 09
Total,	\$109,000 00	\$77,280 81	\$31,719 19

INCOME OF LIBRARY FUNDS, ETC.

LEWIS FUND.

Cash on hand Sept. 30, 1897,	\$5 69	
Interest on Springfield bond,	70 00	
		\$75 69
Rent in State safe deposit vault,	\$5 00	
Deposit in Worcester County Institution for Savings, .	20 00	
Cash on hand Sept. 30, 1898,	50 69	
		\$75 69

WHEELER FUND.

Cash on hand Sept. 30, 1897,	\$24 73	
Dividends and tax rebate,	210 39	
		\$235 12
Expended for books,	\$175 50	
Cash on hand Sept. 30, 1898,	59 62	
		\$235 12

MANSON FUND.

From principal,	\$123 44	
Dividends,	47 00	
		\$170 44

LAWN FUND.

Principal established March 30, 1898,	\$1,500 00	
Sale of wood,	154 00	
Dividend,	15 00	
	<hr/>	\$1,669 00
Deposited in Worcester Mechanics Savings Bank,		\$1,669 00

LIBRARY FUND AND LAWN FUND.

Lewis Fund Investment.

Springfield bond,	\$1,140 00	
Worcester County Institution for Savings,	134 90	
Cash on hand Sept. 30, 1898,	50 69	
	<hr/>	\$1,325 59

Wheeler Fund Investment.

Seven shares Central National Bank,	\$840 00	
Six shares Worcester National Bank,	750 00	
Worcester County Institution for Savings,	1,145 86	
Worcester Five Cents Savings Bank,	1,719 49	
Cash on hand Sept. 30, 1898,	59 62	
	<hr/>	4,514 97

Manson Fund Investment.

Worcester County Institution for Savings,	1,130 97	
Total of library funds,	<hr/>	\$6,971 53

Lawn Fund.

Worcester Mechanics Savings Bank,	\$1,669 00
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LAND ACCOUNT.

Cash on hand Sept. 30, 1897,	\$631 13
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EXPENDITURES.

Remitted to State Treasurer,	\$500 00	
Cash on hand Sept. 30, 1898,	131 13	
	<hr/>	\$631 13

Respectfully submitted,

ALBERT WOOD,

Treasurer.

Oct. 1, 1898.

WORCESTER, MASS., Oct. 24, 1898.

I hereby certify that I have this day compared the treasurer's statement of disbursements for the year ending Sept. 30, 1898, with the vouchers on file at the Worcester Lunatic Hospital, and find them to agree. I have also inspected the securities representing the invested funds of the institution, and find that their market value is as stated.

GEO. L. CLARK,
Auditor of Accounts.

SUPERINTENDENT'S REPORT.

To the Trustees of the Worcester Lunatic Hospital.

I herewith respectfully submit the following report of the hospital for the year ending Sept. 30, 1898, it being the sixty-sixth annual report.

There remained at the hospital Oct. 1, 1897, 867 patients,—382 men and 485 women. During the year 488 patients—257 men and 231 women—were received; 481 patients—261 men and 220 women—were discharged; and 57 men and 44 women died, leaving at the end of the official year 874 patients,—378 men and 496 women. Of this number, 274 were supported by the State, 472 by cities and towns and 160 by friends. Of the 481 persons discharged, 121, including 2 habitual drunkards (women), were reported recovered, 56 as much improved, 70 as improved and 125 not improved; 8 were discharged not insane. Ten men and 16 women were removed by the overseers of the poor; 32 men and 24 women were discharged to the care of the Board of Lunacy and Charity, to be removed from the State; 17 men and 13 women were transferred to the Epileptic Hospital; 15 men to the Boston Lunatic Hospital; 1 man and 30 women to the Medfield Asylum; 15 women to the Worcester Insane Asylum; 1 man to Bridgewater, 1 to Taunton and 1 to the McLean Hospital; 5 escaped, and were not returned to the hospital or accounted for at the end of the official year. Of the 8 persons discharged as not insane, 6 of them were cases of simple over-indulgence in alcohol, and the 2 others, one of whom was committed from the Reformatory for Women and the other from the Cambridge jail, were evidently malingers.

The number of patients remaining in the hospital at the close of the official year is practically the same as it was at

the beginning, while our daily average, 871.4, has been slightly higher than last year.

The percentage of recoveries, calculated upon the number of discharges and deaths, was 20.8; calculated upon the number of admissions, it was 24.78,—a material increase over that of last year.

The death rate was 11.5 calculated upon the average number of patients, and 7.4 calculated upon the total number under treatment.

In reviewing the work undertaken in the medical department, we find ourselves already confronted with an embarrassment of riches. Our cases are so numerous and the means at our disposal for their examination so relatively small that we have not always been able to work them up as thoroughly as is desirable or necessary, if our histories are to be of use for future study. Our young men have, I believe, shown all the industry and zeal that could reasonably be required in the work allotted to them; but, notwithstanding all this, we find many gaps in our cases which remain unfilled simply from a lack of time to make the examination necessary, or from a failure to make it at the moment when such an examination is alone worth making.

To study insanity successfully, it is not sufficient to study simply the condition of the brain and the nervous system; the whole realm of medical knowledge must be brought under contribution, and every organ of the body questioned. In general diseases it is often possible to infer from the symptoms present what special organ is at fault, and to limit an examination to that; but no such inference is allowable if one would come at the exact cause underlying the disease in a given case of insanity. To thoroughly examine an insane person requires, therefore, not only skill, but time; and the neglect to get a statement, either positive or negative, as to the condition of certain organs, may be fatal to the records of the case when the time comes for summing them up. We cannot believe, therefore, that our work has been laid out upon too broad a basis, nor can we bring ourselves to feel that the proper way out of this difficulty is to limit our investigations to a certain number or class of cases. It might be feasible perhaps to limit our admissions and thus relieve us somewhat. It would

be a great relief, certainly, if the transient cases could be eliminated, — the cases that have no settlement in Massachusetts, and as a consequence are removed by the State Board of Lunacy and Charity, and sent out of the State a few days or weeks after they are committed. There were 56 such cases this year. Few of them were in the hospital long enough to receive any benefit from treatment; and certainly, from a medical stand-point, the time spent in taking their histories and in working up their cases was simply thrown away. At the time of their admission we have no way of knowing which of our patients are likely to come under this head.

There are many problems in regard to insanity which can only be worked out by keeping in touch with a considerable number of cases through life, or for a long number of years, at least. It is our plan to do this, as far as possible; and we can, of course, best do it when the patients remain in the hospital for a reasonable length of time, and when they live in the neighborhood of the institution and can be followed to their homes after their discharge. From this point of view, it would undoubtedly be well if the commitments to this hospital could be limited to persons from Worcester and Middlesex counties.

It would also help matters somewhat, I have no doubt, and make it easier for all the hospitals, if a change were made in the method of disposing of the Boston commitments. Under the present arrangement these patients are sent to each hospital — with the exception of Northampton — alternately, for a month or more. No insane hospital can receive from three to five new cases each day for a month — the majority being excited cases — without getting swamped in their work. This at least is what happens when it comes our turn to receive the Suffolk County commitments. Instead of requiring the hospitals to receive these commitments, as is now done, it would be more satisfactory if they were sent to the various hospitals for a week, or at most two weeks, at a time. Perhaps the new Board of Insanity may assist us in this direction.

But, were everything done that has been indicated, or that could be done, I fear that we should still be unable to accomplish the work placed before us in as thorough a manner as it should be done, with our present help. Aside from our histories and the matters which pertain directly to the cases in

hand, we are accumulating a mass of material bearing upon the specialty, which would be of great value were it properly worked up. This material should be utilized as we go along, or much of its value is likely to be lost. While this does not belong strictly to the medical work of this institution, it is work which it is worth the while of the hospital to do and of the State to foster. It can be done nowhere so well as in a large hospital, for nowhere else is the material at hand. Here we have not only material in abundance, but — and I say it in no sense as a mere compliment to the director of our laboratory — talent and ability of the highest order, ready to devote itself thereto, were adequate means for doing so at hand. In other and neighboring States they do not hesitate to encourage such work, and many of them appropriate for this purpose sums which are truly vast as compared with the modest outlay we anticipate. Such additional assistance as would be required to meet our wants could be obtained without difficulty. With our present arrangements, our junior assistants leave us at the time when they are beginning to be most useful to the institution. So far all of them have expressed a desire to remain here a second year. Their services could no doubt be secured at but slight advance in the way of salary; and, if one or more of them could be retained as second year junior assistants, it would be very desirable. The new Board of Insanity may think it within their province to advise us here also, and perhaps give us countenance and encouragement in extending our work in this direction.

The two infirmary wards, work upon which was begun last year, are now practically completed and will soon be ready for occupation. They have been substantially built, after plans which were described in detail in the report of 1896. In their construction they will compare favorably with the original buildings, and in this connection I feel it a duty and a pleasure to commend the contractors, Messrs. J. W. Bishop & Co., for the good quality of their work and the very satisfactory way in which they have carried out their contract. It is certainly to their credit and to that of their foreman that the buildings have been completed without accident of any kind, and without inconvenience to the inmates or disturbance of the ordinary routine of the hospital.

In compliance with the request of your Board, the Legislature of 1897 granted the hospital an appropriation of \$69,000 : \$11,000 for a boiler house and three boilers, \$18,000 for a new kitchen and \$40,000 for an addition to the rear of the executive building, to better accommodate the employees and to furnish work rooms for patients. Ground was broken for the boiler house and kitchen in July, and the work has since been pushed as rapidly as possible. The boiler house is now completed, and five new boilers, each 72 inches in diameter and 19 feet 6 inches long, have been installed. The kitchen is also very nearly done.

At the time of making the plans and estimates for the boiler house it was thought that two of the old boilers could still be used. It was necessary, however, to take them out in order to make room for the boiler house, and in doing this it was found that they were much worn and that neither of them was in a condition to reset. The trustees decided, therefore, to supply their places with new ones. These additional boilers and the setting and piping of the entire bank have been provided for out of the funds of the institution. The contract for the boilers was awarded to Stewart & Sons of Worcester. The piping, setting, etc., has been done by our own employees, under the direction of our mason and engineer.

Notwithstanding the considerable expense involved, it was thought best to take advantage of the opportunity now afforded to remodel our steam plant, it never having been quite satisfactory from the first. The returns from many of the radiators, and especially from those in the basement and on the first floor, were too nearly on a level with the water line of the boilers. To obviate this, the new boilers were depressed twelve feet. This has necessitated extensive excavation, and the construction of a tunnel sixty feet long, to enable us to discharge the ashes from the boilers at grade ; but it has at the same time given us a much-needed addition to our coal pocket, and a room over this which will be of use as a dynamo room whenever we are ready to put in an electric plant. An air-duct, 8 feet wide by 8 feet high, has been run from the executive building to the boiler house and connected with the ducts (of like dimensions) running to the male and female wards. The 12-inch steam mains have been taken out of the brick trenches in which they

were formerly run and placed in these ducts, where they can more easily be gotten at and protected and repaired; the steam and water connections for the new kitchen run through the same ducts.

When the subject of a kitchen was first considered, it was thought, for many reasons, desirable to place it on the upper story of the proposed addition to the executive building, and plans were so drawn; but it was found that this would be an expensive building, if constructed with due regard to safety from fire, and this plan was, therefore, given up and the present one substituted therefor. The kitchen as now located is entirely separate from the other buildings. It fills the space at the west of the laundry formerly used for a clothes yard, and is connected with the main building by a short corridor. It is one story high, covers a ground space of 104 by 103 feet, and is built of stone from the quarry upon the grounds, and in this respect conforms to the rest of the house. It comprises a kitchen proper, a scullery, a bakery (with the necessary closets and pantries for each), a bread room, a room for storing flour, a meat room, and three refrigerators with a combined storage capacity of two hundred tons of ice. As in the old kitchen, the floor is on a level throughout with the basement floor of the main building, making the distribution of food and supplies easy. The doors for the reception of supplies and for the removal of the garbage are located at the rear of the building and entirely out of sight from the wards. The change in this respect from the conditions about the old kitchen is very marked and satisfactory. From the rear of the women's wards the outlook is now upon the unbroken front of a building which not only hides its own débris but screens the unsightly coal sheds as well, and is not itself displeasing architecturally.

As the extension of the executive building will occupy the site of the old kitchen, nothing can be done towards its erection until the new kitchen is finished and occupied. We shall then commence excavating for the foundations of this building. This work will be carried on through the winter, and will be done with the labor of patients, thus giving them employment and making a very material saving in the expense of construction.

Heretofore we have had no proper place in which to store

any considerable part of the great number of records and valuable papers which have been accumulating from the opening of the institution in 1834. The records of former patients (which have been preserved in an unbroken series), although not of much use as medical records, are exceedingly valuable in other directions, and, together with the records pertaining to the past business transactions of the institution, have to be consulted frequently. To provide a safe and convenient place for preserving these and the much more valuable histories of our patients as now taken, we have built a fire-proof vault, with two storage rooms, each 7 by 14 feet. It is entirely outside of the building, on the west side of the corridor connecting the wards and the chapel wing with the centre, and occupies the space heretofore devoted to a piazza. The entrance is from the centre building and is convenient to the general office. It is built after the manner of a safety deposit vault, the exterior structure being of stone, to conform with the original building. The cost of the vault was \$4,226.

One of the most valuable and labor-saving improvements made during the year has been the introduction of a system of telephones, connecting the wards and all departments of the hospital with each other. The system was devised and put in by Messrs. Plummer, Ham & Richardson of this city. It is automatic in its action, the various connections being made by simply pushing in a button indicating the station wanted. All stations are not represented on each box, however, but only such as it is desirable to have directly connected, or such as a given station has occasion to use most often. To call stations not on one's list, a connection must be made through the central office. A call bell in each ward and in various parts of the building, with a system of signals, makes it easy to call and communicate with any of the officers, wherever they may be. The system is sold outright. The sixty-one stations, with lead cables to the farm and out-buildings cost \$2,000.

Drs. E. D. Boynton and G. A. Tripp left the service of the hospital at the beginning of the official year, to enter general practice. Drs. R. R. Gurley and A. R. Defendorf were promoted from junior assistants to assistants, in their place.

Of the remaining junior assistants for 1896-97, Dr. Emma W. Mooers received an appointment as pathologist at North-

ampton, and Dr. Edwin Leonard, Jr., that of assistant at McLean Hospital.

The junior assistants for this year have been Drs. H. W. Miller, W. D. Berry, A. M. Barrett and A. E. Loveland.

At the close of his service as junior assistant Dr. Berry will remain here as assistant, in the place of Dr. Defendorf, who has received an appointment as pathologist at Middletown, Connecticut, and lecturer on insanity and nervous diseases at the Yale Medical School. Dr. Barrett, who came here on a year's leave of absence, returns to his old position at the Mt. Hope Hospital, Iowa. Drs. Miller and Loveland go to McLean.

The current expenses, less the amount received for articles sold, have been \$168,721.85; dividing this by 871.4, the daily average number of patients, gives \$188.06 as the annual cost of support, which is equivalent to a weekly cost of \$3.60.

H. M. QUINBY,

Superintendent.

WORCESTER LUNATIC HOSPITAL, Sept. 30, 1898.

SPECIAL REPORT OF THE MEDICAL DEPARTMENT.

While it seems exceedingly distasteful to fall into the habit of describing plans for the future, the execution of which is by no means always certain, it is hardly possible to give a correct statement of what has been done without outlining briefly the guiding principle. After all, this has been our working principle from the first, and, inasmuch as this holds, it may be stated without danger of provoking the above criticism.

The work in a hospital must centre in the duties to the patients; the efforts of the medical staff must tend towards increasing the efficiency of the duties towards the patients and their families. This, I think, is the conviction with all those seriously interested in hospitals for the insane.

The ways to achieve this are many. The most prominent and most successful one has no doubt been the effort towards increase of the personal care of patients, the nursing, which has been developed so efficiently in many of the American hospitals. It had its wholesome effect both on the patients and on the physicians, although the latter in many places have hardly developed beyond what might be called a medically trained head nurse. In a few hospitals more purely medical work was introduced, in the form of pathological anatomy and perhaps bacteriology; and the examination of urine and sputa and lately also of blood has been relegated into the hands of a "pathologist." While the immediate and perhaps even the remote results of this improvement probably remain behind the value of the improvement in the nursing, it has at least led many of us to further problems, and especially to the conviction that the nursing of the patient must be supplemented by careful clinical observation, and that true medical study must begin before the patient is dead. It is really a calamity

that the word pathology should more and more have singled out the study of and interest in a few technical methods largely relating to the microscopic examination of dead tissues and excreta and of the flora and fauna of human symbiosis, in the minds at least of a great part of the medical men, and that the larger principles of general pathology seem superfluous, just as if the current grasp of the "theory and practice of medicine" would embrace all that is fit to be known in one's daily work as a physician in hospital practice.

Psychiatry is undoubtedly the one branch of medicine for which pathology in the narrow sense of pathological anatomy and bacteriology has done very little and promises little. Here the pathology of the clinicians, the broad inquiry into disease processes, must come to its right first. The close relation of neurology and psychiatry has led many to believe that the only legitimate research work of the alienist was pathological anatomy of the nervous system; and, when we look through the bulk of valuable contributions from alienists, we see indeed that a Meynert, a Westphal, a Hitzig, even a Wernicke, have devoted a large share of their work to studies of the nervous system, which have nothing to do with psychiatry, not to speak of Flechsig, Siemerling, Moeli and others who are professors of mental diseases on ground of their neurological work only. Psychiatry proper has indeed moved either in symptomatological studies or in semi-philosophical considerations, and Kahlbaum's efforts to replace the metaphysical or roughly symptomatic systems by a sound clinical empiricism and general pathological thought came just in the days when the great discoveries in cerebral localization overshadowed everything else, and attracted the enthusiasm of most young investigators. Kraepelin was one of the first who had the courage to build a psychiatry on lines foreshadowed by Kahlbaum, and with principles derived from the pure clinical observation and a view of psychology of his own.

The work at our hospital was begun with a desire to do justice to the opportunities for an improvement of medical knowledge necessarily offered by the large amount of observations which could be collected. The experience in Kankakee had shown conclusively that pathology begun on the post-mortem table failed to make its point almost along the whole line.

Notwithstanding many difficulties, a plan for more clinical investigation of the cases was started there, in order to furnish the post-mortem anatomy a few data of live pathology at least. In the organization of the work in Worcester the greatest weight was laid on this point, and an equally great stress on the necessity of dropping the distinction between "interesting" and "uninteresting" cases. Ever since text-books of mental diseases were written, a few impressive types of patients had been described to the readers as instances of diseases, and for the majority of the patients we are forced to admit that we might class them in more than one of the standard groups, but in none quite justly. This should be enough evidence that this favoritism in clinical psychiatry has not brought us far. The plan is, therefore, to observe all patients with the same accuracy and with all those questions in view which seem now to require an answer for the purpose of elimination of uncertainties in clinical systematization.

We stand now before questions such as our forefathers met in the "continued fevers." Internal medicine has learned to divide them into miliary tuberculosis, typhoid fever, protracted forms of pneumonia, malaria, "status gastricus febrilis," fever of anemia, of hysteria, — more or less distinct pathological and nosological entities; the "transition forms" are plainly shown to become rarer and prove to be at best mixed forms; *i. e.*, patients with two disease processes, or insufficiently observed cases. We must make use of this experience in psychiatry; search for distinctive features of disease processes, and distrust any system which leaves out the majority of patients as now classified, or classifies only by main force.

Physicians trained in our bacteriological era are prone to think that most of the above divisions of "continued fever" are a product of the last decades, and that only the latest results of what I called above the study of the flora and fauna of man have settled these problems. They certainly have furnished the most decisive and obvious demonstrations; but to deny the older clinicians the ability of having clearly foreseen most of these divisions and of having been able to act accordingly, would be a grave injustice and ingratitude towards those who have ably prepared the ground for pathological research in the restricted sense of the word by putting forth clinical

problems as guides of research. This should be remembered before we deny psychiatry the right of a hopeful existence, although a pathological anatomy and bacteriology of the brain have furnished but few data, and physiological chemistry is too much in its infancy to give us the much-needed help in an accessible form.

All these points were carefully weighed when our work was organized, and our plan took the following form:—

To the greatest extent possible the work is to be limited to what is essential for the care of the patients, the training for greatest efficiency of the medical work and the promotion of promising and important general questions, such as the development of a real record of the experience of the hospital, which would form a natural array of facts, preferable to textbook traditions.

In analogy with the proverb, “Noblesse oblige,” we may well say that opportunities create obligations. Hospitals offer opportunities which a private practice can never afford, and the public who support a hospital should be trained to demand a use of the opportunities, returns from the experience to the benefit of those physicians who cannot avail themselves directly of the advantages of hospital work. Such returns are being furnished from most general hospitals; the State hospitals for the insane have often enough been taken to task for not doing the same, and desperately unconvincing replies have frequently been the echo of such criticism. It is true that a few of the enumerated difficulties cannot be ignored, and corroborate the conviction that the work in State hospitals must gravitate to the best possible care of the patients, and that every other effort must bear as directly as possible on the efficiency of the medical work. The accumulation of scientific knowledge cannot be the uppermost aim, but it finds its place naturally enough in a careful arrangement of the work which *must* be done. Careful histories *must* be taken, accurate methods of examination of patients *must* be used, prognoses *must* be given the friends, and indications for treatment *must* be formulated. And, when autopsies are made, they must be fit to give an answer to the most important questions,—not merely to the point interesting a coroner, the “cause of death,” but to ever so many essential problems of etiology and differential diag-

noses of pathological anatomy. It is the fatal division of practical and theoretical, of routine and research work, which furnishes so many excuses to those who would like to separate reason and sense from the mere comfort of their daily duties.

Apart from the conviction that the odd and "uninteresting" cases were to be given due attention as well as the "pets" of literature and tradition, the necessity of considering the entire course of diseases and their influence on the later life of the patient has received much consideration. For this very essential, though much-neglected, part of psychiatry, a shifting population presents many difficulties. Many hospitals in which patients had been before have very generously given us abstract of records, and, with some help from the authorities who attend to the transportation of many of our patients into the hands of foreign authorities, it would become possible to supplement our forecast by statements of the actual fate of those made the object of our study and treatment. Without such an effort we would always grope in the uncertain light of our more or less optimistic imagination, and never be able to say what the hospital really achieves and what would be the most advisable steps in the great social problem.

The enormous number of "interesting data" one meets in observation of about five hundred admissions a year makes a great restriction in the work necessary. Instead of striving for endless biographies of patients, we must learn to give concise statements with answers to all the important questions on which we are really working, and without waste in useless directions, or on topics for which we have not a strong enough working force in our present staff. For this reason we did not take part in that wave which passes over the country in the form of routine examination of the blood, but restricted it to special indications; nor have we entered on complicated psychological experiments. A great deal of the work of the past two years has indeed been devoted to the decision of what could be done most profitably and what should be the indications for our efforts in every special direction. A certain amount of blind, purposeless work is unavoidable; but the main lines must be chosen judiciously on ground of sound working hypotheses. They must answer distinctly felt needs.

From this point of view disease concepts become more than

mere names. It is quite a different question whether a person will suffer from periodic attacks of mental diseases with perfectly clear intervals of usefulness or from a steady and lasting deterioration. This can be seen by a glance at the table of statistics, which contains, as it were, a curve of recoverability in the following groups: the periodic psychosis with no, or but little, deterioration after an attack, the catatonia with occasional recoveries, dementia præcox with lasting defect, and paranoic conditions and paranoia practically never curable. It goes without saying that the last word is not spoken concerning a truly medical classification of mental diseases; but in a measure, as we learn to make distinctions of practical and essential value, we shall gladly relegate the meaningless terms, mania, melancholia, etc., of our former statistics to the vocabulary of mere symptomatology.

A strong stimulus for accuracy is received by the careful autopsies which are made whenever permission is obtained. With about an equal number of deaths, 68 autopsies were permitted, against 36 last year. This is due to the greater interest taken by the physicians in the opportunity of controlling and enlarging their observations, and perhaps to the greater confidence of the friends of patients in purposes of such examinations.

The result of this work is manifold. It affords training in accurate thought and methods which the medical college can rarely give in an equally forcible manner to the student who is overburdened with cramming; and invaluable material and experience are accumulated for the time when a monographic treatment of the disease forms observed in our hospital can be thought of. It has also yielded a number of findings which can be added as valuable material to the slowly growing knowledge of the architecture of the brain. Further, it begins to constitute a collection of great value to those who wish to study the nervous system and not merely the books on the same.

On the whole, though, we had to lay on our work many restrictions which are a cause of frequent disappointment. Considering the amount of work which must be done conscientiously and without the inaccuracy of haste, many very essential points could not be settled in certain cases because the working force was taxed to the utmost. Part of this may be better in the course of time through the development of time-saving methods,

but not all. This question deserves serious consideration. There is nothing more demoralizing than the feeling that, even with the strongest effort, that which seems a reasonable scope of the task is beyond one's working capacity. I lay to this fact the discouragement and lack of medical interest of the physicians in most hospitals for the insane; they stand before an unmanageable task, and no effort is made to limit it to well-defined problems and to furnish an estimate of what working force is really needed for a true minimum efficiency of medical work proper. Under those conditions the authorities cannot be blamed for not providing more help, because they see no end of possible needs. It is therefore one of the tasks in the management of an attempt conscientiously to do justice to the medical duties in such a large hospital, to be fully aware of the minimum scope of a profitable working plan and of the proportion between the working force needed and the working power available, so that the demoralizing feeling of impossibilities does not get the upper hand, both on the side of the medical staff and on the side of the authorities who are responsible for the hospital.

I cannot leave this remark without expressing my recognition of, and gratitude for, the untiring efforts of my colleagues, who never shirked any pains, even to the extent of overtaxing their working power, in the common effort to do justice to the task before us.

The general arrangement of the work, as outlined by Dr. Quinby in the report of 1897, is still maintained. Apart from the daily report of cases and discussions on the topics brought out by them, a number of conferences were devoted to a consideration of literature on various clinical topics, and a complete course on the anatomy of the nervous system on ground of demonstrations and practical exercises was carried out. The study of serial sections in a number of interesting brain lesions was carried further, and is maturing for publication. Clinical questions, too, are being submitted to more careful studies; but it lies in the nature of the subject — the necessity of watching the outcome for a number of years at least after a "cure" — that it would be injudicious to rush to print with what has been done.

Since Oct. 1, 1897, the following publications have come forth from our hospital:—

“Various Types of Changes in the Giant Cells of the Paracentral Lobule,” “American Journal of Insanity,” October, 1897; “Anatomical Findings in a Case of Facial Paralysis of Ten Days’ Duration,” “Journal of Experimental Medicine,” Vol. II., No. 6, 1897; “The Morbid Anatomy of a Case of Hereditary Ataxia,” “Brain,” Vol. XX, p. 276.

The following articles are in press: “Critical Digest of the Present Concepts of the Nervous System;” “Critical Review of Modern Presentations of Neurology.”

Respectfully,

ADOLF MEYER.

LIBRARY REPORT.

The library contains 3,254 volumes. One hundred and twenty-seven volumes have been added during the past year, 5 volumes have been destroyed, while 6 volumes have been found, during renovation of shelves, to be useless, making a total of 11 volumes. One hundred and twenty-four volumes have been sent to the bindery to be repaired.

The average number of books issued weekly from the main library has been 66. During the year six ward libraries have been established, containing 942 volumes. The weekly reports of books issued to patients from these libraries give an average of 42. Of these, the Appleton 1 library has the poorest record, $5\frac{1}{8}$; while Howe 3 has the best, $8\frac{6}{7}$.

Six books have been sent to nine different halls each week, to lie on the centre table, where all patients could have free access to them.

Total average number of books issued weekly to patients has been 162 (less than 80 last year).

The card catalogue of the library has been improved by adding, to the already existing title catalogue, an author's catalogue. This work is not yet completed.

STATISTICAL TABLES.

i. — General Statistics of the Year.

	INSANE.			HABITUAL DRUNKARDS.			AGGREGATE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Patients in the house Oct. 1, 1897,	382	484	866	—	1	1	382	485	867
Admitted within the year,	257	228	485	—	3	3	257	231	488
Whole number of cases within the year,	639	712	1,351	—	4	4	639	716	1,355
Discharged within the year: —									
Viz.: as recovered at time of leaving the hospital,	76	43	119	—	2	2	76	45	121
as much improved,	37	18	55	—	1	1	37	19	56
as improved,	42	28	70	—	—	—	42	28	70
as not improved,	45	80	125	—	—	—	45	80	125
as not insane,	4	4	8	—	—	—	4	4	8
Deaths,	57	44	101	—	—	—	57	44	101
Patients remaining Sept. 30, 1898,	378	495	873	—	1	1	378	496	874
Viz.: supported as State patients,	129	113	242	—	—	—	129	113	242
as town patients,	192	279	471	—	1	1	192	280	472
as private patients,	57	103	160	—	—	—	57	103	160
Number of different persons within the year,	634	704	1,338	—	4	4	634	708	1,342
Number of different persons admitted within the year,	253	227	480	—	3	3	253	230	483
Number of different persons recovered within the year,	74	43	117	—	2	2	74	45	119
Daily average number of patients: —									
Viz.: State patients,	—	—	—	—	—	—	115.18	104.72	219.90
town patients,	—	—	—	—	—	—	210.44	293.39	503.83
private patients,	—	—	—	—	—	—	55.80	91.86	147.67

2. — *Monthly Admissions, Discharges and Averages.*

MONTHS.	ADMISSIONS.			DISCHARGES.			DEATHS.			DAILY AVERAGE OF PATIENTS IN THE HOUSE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
1897.												
October,	15	18	33	16	6	22	4	5	9	369.32	481.32	850.64
November,	24	10	34	14	4	18	3	2	5	371.93	481.43	853.36
December,	27	23	50	11	14	25	7	8	15	381.13	484.09	865.22
1898.												
January,	17	18	35	11	3	14	5	5	10	391.48	488.77	880.25
February,	11	13	24	10	11	21	5	3	8	390.07	495.21	885.28
March,	18	16	34	11	10	21	3	4	7	390.86	502.16	893.03
April,	31	26	57	23	9	32	5	4	9	388.70	507.56	896.26
May,	29	19	48	36	29	65	10	3	13	393.58	514.80	908.38
June,	32	23	55	16	54	70	4	4	8	379.83	501.60	881.43
July,	16	22	38	22	12	34	5	1	6	382.06	468.51	850.58
August,	12	12	24	8	9	17	5	3	8	367.38	470.90	838.28
September,	25	31	56	26	15	41	1	2	3	370.73	483.47	854.20
Total of cases,	257	231	488	204	176	380	57	44	101	-	-	-
Total of persons,	253	230	483	200	175	375	-	-	-	-	-	-
Daily average,	-	-	-	-	-	-	-	-	-	381.42	489.98	871.40

3. — *Received on First and Subsequent Admissions.*

NUMBER OF THE ADMISSION.	CASES ADMITTED.			TIMES PREVIOUSLY RECOVERED.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
First,	219	198	417	—	—	—
Second,	28	25	53	8	3	11
Third,	6	4	10	—	2	2
Fourth,	—	2	2	—	—	—
Fifth,	3	—	3	2	—	2
Sixth,	—	1	1	—	1	1
Seventh,	—	1	1	—	1	1
Eighth,	1	—	1	1	—	1
Total of cases, . . .	257	231	488	11	7	18
Total of persons, . .	253	230	483	9	7	16

4. — *Relation to Hospital of Persons admitted.*

	Males.	Females.	Totals.
Never before in any hospital for insane, . . .	196	165	361
Former inmates of this hospital only, . . .	34	30	64
Former inmates of other hospitals only, . . .	20	29	49
Former inmates of this and other hospitals: —			
Butler,	—	1	1
Danvers,	1	—	1
McLean,	1	1	2
Northampton,	—	2	2
Pierce Farm,	1	—	1
Danvers, Taunton, South Boston and Westborough,	—	1	1
Stockton, Cal.,	—	1	1
Total of persons,	253	230	483

5. — *Parentage of Persons admitted.*

PLACES OF NATIVITY.	MALES.		FEMALES.		TOTALS.	
	Father.	Mother.	Father.	Mother.	Father.	Mother.
Massachusetts,	43	42	31	29	74	71
Other States:—						
Maine,	11	7	10	12	21	19
New Hampshire,	7	9	3	5	10	14
Vermont,	3	3	5	2	8	5
Rhode Island,	—	—	1	3	1	3
Connecticut,	1	3	1	1	2	4
New York,	2	2	2	3	4	5
New Jersey,	2	1	—	—	2	1
Maryland,	1	1	—	—	1	1
Virginia,	—	—	3	3	3	3
North Carolina,	—	1	—	—	—	1
South Carolina,	1	1	—	1	1	2
Georgia,	—	1	—	—	—	1
Louisiana,	1	—	—	—	1	—
Nebraska,	—	1	—	—	—	1
California,	1	—	—	—	1	—
Other countries:—						
Canada,	13	14	9	8	22	22
Nova Scotia,	6	5	7	9	13	14
Prince Edward Island,	1	1	—	—	1	1
New Brunswick,	4	4	2	4	6	8
Newfoundland,	—	1	2	1	2	2
Scotland,	1	1	6	6	7	7
England,	10	9	7	6	17	15
Ireland,	97	99	73	73	170	172
Wales,	1	1	—	1	1	2
Norway,	—	1	1	1	1	2
Sweden,	5	5	10	10	15	15
Finland,	1	1	—	—	1	1
Holland,	1	1	—	—	1	1
France,	3	2	1	1	4	3
Germany,	6	5	4	3	10	8
Poland,	2	1	—	—	2	1
Russia,	1	2	1	1	2	3
Spain,	—	1	—	—	—	1
Italy,	2	2	—	—	2	2
West Indies,	—	—	1	1	1	1
China,	1	1	—	—	1	1
Unknown,	25	24	50	46	75	70
Total of persons,	253	253	230	230	483	483

6. — *Birthplace of Persons admitted.*

PLACES OF BIRTH.	Males.	Females.	Totals.
Massachusetts,	95	79	174
Other States:—			
Maine,	8	10	18
New Hampshire,	12	6	18
Vermont,	3	3	6
Rhode Island,	2	3	5
Connecticut,	2	1	3
New York,	2	6	8
New Jersey,	—	1	1
Pennsylvania,	—	1	1
Virginia,	1	2	3
North Carolina,	1	—	1
Florida,	—	1	1
Louisiana,	1	—	1
Illinois,	1	2	3
Other countries:—			
Canada,	13	10	23
Nova Scotia,	8	10	18
Prince Edward Island,	2	3	5
New Brunswick,	9	7	16
Newfoundland,	—	2	2
Scotland,	1	2	3
England,	11	10	21
Ireland,	51	45	96
Norway,	—	1	1
Sweden,	6	10	16
Finland,	1	—	1
Holland,	1	—	1
France,	1	1	2
Germany,	6	1	7
Poland,	1	1	2
Russia,	3	2	5
Austria,	—	1	1
Italy,	2	2	4
Arabia,	—	1	1
China,	1	—	1
West Indies,	—	1	1
Unknown,	8	5	13
Totals,	253	230	483

7. — *Residence of Persons admitted.*

PLACES.	Males.	Females.	Totals.
Massachusetts (by counties) :—			
Berkshire,	1	—	1
Essex,	—	1	1
Middlesex,	88	87	175
Norfolk,	3	4	7
Suffolk,	57	43	100
Worcester,	104	95	199
Totals,	253	230	483
Cities or towns,	253	230	483
Country districts,	—	—	—

8. — *Civil Condition of Persons admitted.*

NUMBER OF THE ADMISSION.	UNMARRIED.			MARRIED.			WIDOWED.			DIVORCED.			UNKNOWN.			TOTAL.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
First, . . .	109	76	185	86	94	180	20	25	45	1	1	2	3	2	5	219	198	417
Second, . . .	13	10	23	9	11	20	1	2	3	1	1	2	-	-	-	24	24	48
Third, . . .	5	1	6	-	1	1	1	1	2	-	1	1	-	-	-	6	4	10
Fourth, . . .	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	2	2
Fifth, . . .	2	-	2	1	-	1	-	-	-	-	-	-	-	-	-	3	-	3
Sixth, . . .	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1
Seventh, . . .	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Eighth, . . .	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Totals, . . .	130	89	219	96	108	214	22	28	50	2	3	5	3	2	5	253	230	483

9. — Occupation of Persons admitted.

FEMALES.	
Book-keepers, 2	Shoe-shop employee, 1
Cooks, 2	Student, 1
Dressmakers, 4	Teachers, 3
Domestics, 22	Tailoress, 1
Housewives, 71	Typesetter, 1
Housekeepers, 37	Waitress, 1
Laundresses, 2	Weavers, 2
Librarian, 1	Unknown, 11
Mill operatives, 15	No occupation, 50
Nurse, 1	
Night walker, 1	Total, 230
Seamstress, 1	

MALES.	
Barbers, 3	Dyer and color mixer, 1
Blacksmiths, 4	Engineer, 1
Brakemen, 2	Farmers, 9
Brick masons, 2	Freight handler, 1
Book-keeper, 1	Fireman, 1
Book folder, 1	Foremen, 3
Bobbin maker, 1	Grocer, 1
Carpenters, 6	Hostler, 1
Canvassers, 2	Iron founder, 1
Carriage trimmer, 1	Ice dealer, 1
Clerks, 7	Laborers, 56
Cook, 1	Laundry man, 1
Coopers, 3	Letter carrier, 1
Comb maker, 1	Lumber dealer, 1
Coachman, 1	Machinists, 12
Druggists, 2	Merchants, 4

9.—Occupation of Persons admitted—Concluded.

MALES—CONCLUDED.

Mill superintendent,	1	Ship calker,	1
Motorman,	1	Shirt cutter,	1
Moulders,	4	Stone masons,	2
Musician,	1	Stone cutters,	2
Operatives,	15	Students,	3
Printers,	2	Tailors,	5
Painters,	5	Teamsters,	5
Paper hanger,	1	Tinsmith,	1
Piano finisher,	1	Undertaker,	1
Photographer,	1	Waiter,	1
Physicians,	2	Watchman,	1
Plumbers,	2	Weaver,	1
Reporter,	1	Window cleaner,	1
Rubber factory employee,	1	Wire workers,	2
Shoemakers,	7	Wood carver,	1
Salesmen,	4	Unknown,	6
Seamen,	3	No occupation,	31
Steam fitter,	1		
Ship carpenters,	2	Total,	253

10. — Probable Causes of Disease in Persons admitted — Concluded.

CAUSES.	PERSONS ADMITTED.				INSANE.				HABITUAL DRUNKARDS.			
	INSANE.		HABITUAL DRUNKARDS.		PREVIOUS ATTACKS.		HEREDITARY PREDISPOSITION.		PREVIOUS ATTACKS.		HEREDITARY PREDISPOSITION.	
	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.
1. Physical — <i>Concluded.</i>												
Injury and grippes,	1	—	1	—	—	—	—	—	1	—	—	1
Injury and domestic trouble,	—	1	1	—	—	—	—	—	—	—	—	—
Trauma and worry,	—	1	1	—	—	—	—	—	—	—	—	—
Overwork,	3	2	5	—	—	—	—	—	—	—	—	—
Overwork and worry,	1	2	3	—	—	—	—	—	—	—	—	—
Ill health,	4	2	6	—	—	—	—	—	—	—	—	—
Ill health and domestic trouble,	—	1	1	—	—	—	—	—	—	—	—	—
Insolation,	3	2	5	—	—	—	—	—	—	—	—	—
Hæmaturia,	1	—	1	—	—	—	—	—	—	—	—	—
Gastric psychosis and financial losses,	1	—	1	—	—	—	—	—	—	—	—	—
Gastric disorder,	1	1	2	—	—	—	—	—	—	—	—	—
Grippe, overwork and worry,	—	1	1	—	—	—	—	—	—	—	—	—
Grippe and home training,	—	1	1	—	—	—	—	—	—	—	—	—
Anæmia and indigestion,	—	1	1	—	—	—	—	—	—	—	—	—
Anæmia,	—	1	1	—	—	—	—	—	—	—	—	—
Coal-gas poisoning and nephritis,	1	—	1	—	—	—	—	—	—	—	—	—
Pelvic abscess,	—	1	1	—	—	—	—	—	—	—	—	—
Pneumonia,	—	1	1	—	—	—	—	—	—	—	—	—
Typhoid fever and bereavement,	—	1	1	—	—	—	—	—	—	—	—	—
2. Mental :—												
Heredity,	20	27	47	—	—	—	—	—	—	—	—	—
Worry,	3	13	16	—	—	—	—	—	—	—	—	—
Shock,	—	1	1	—	—	—	—	—	—	—	—	—
Worry and spiritualism,	—	1	1	—	—	—	—	—	—	—	—	—
Bereavement,	—	1	1	—	—	—	—	—	—	—	—	—
Fright,	1	2	3	—	—	—	—	—	—	—	—	—
Bereavement and spiritualism,	—	1	1	—	—	—	—	—	—	—	—	—
Disappointment in love,	—	1	1	—	—	—	—	—	—	—	—	—
Mental overstrain,	—	1	1	—	—	—	—	—	—	—	—	—
Religious excitement,	1	—	1	—	—	—	—	—	—	—	—	—
Domestic trouble,	1	17	18	—	—	—	—	—	—	—	—	—
Insomnia,	1	—	1	—	—	—	—	—	—	—	—	—
Unknown,	7	14	21	—	—	—	—	—	—	—	—	—
Not insane,	3	4	7	—	—	—	—	—	—	—	—	—
Totals,	253	227	480	—	3	54	136	127	2	—	11	11

11. — Record of Cases admitted within the Year.

PATIENTS.	INSANE.			HABITUAL DRUNKARDS.			AGGREGATE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Admitted,	257	228	485	—	3	3	257	231	488
Discharged, recovered,	51	23	74	—	2	2	51	25	76
much improved,	15	8	23	—	1	1	15	9	24
improved,	24	16	40	—	—	—	24	16	40
not improved,	22	30	52	—	—	—	22	30	52
not insane,	3	3	6	—	—	—	3	3	6
Died,	22	15	37	—	—	—	22	15	37
Remaining Sept. 30, 1898,	120	133	253	—	—	—	120	133	253
Number likely to recover or improve,	46	37	83	—	—	—	46	37	83

12. — *Ages of Insane at First Attack, Admission and Death.*

AGES.	PERSONS FIRST ADMITTED TO ANY HOSPITAL.						PERSONS DIED.					
	AT FIRST ATTACK.			WHEN ADMITTED.			AT FIRST ATTACK.			AT TIME OF DEATH.		
	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.
Congenital,	2	2	4	-	-	-	-	-	-	-	-	-
15 years and less,	4	5	9	3	1	4	2	-	2	-	-	-
From 15 to 20 years, . . .	11	9	20	14	8	22	2	-	2	1	-	1
20 to 25 years,	13	23	36	19	24	43	-	4	4	3	3	6
25 to 30 years,	19	19	38	28	21	49	5	-	5	3	1	4
30 to 35 years,	23	22	45	23	26	49	3	1	4	5	1	6
35 to 40 years,	22	16	38	26	16	42	10	4	14	4	1	5
40 to 50 years,	27	20	47	34	28	62	10	7	17	12	8	20
50 to 60 years,	16	17	33	19	25	44	9	7	16	10	5	15
60 to 70 years,	16	6	22	21	9	30	8	5	13	11	6	17
70 to 80 years,	4	3	7	8	6	14	5	7	12	5	10	15
Over 80 years,	-	1	1	-	1	1	-	4	4	-	8	8
Unknown,	39	22	61	1	-	1	3	5	8	3	1	4
Total of persons,	196	165	361	196	165	361	57	44	101	57	44	101
Mean ages in years, . . .	39.86	37.29	38.58	40.59	39.04	39.81	45.13	49.07	47.1	48.54	58.77	53.65

13. — *Reported Duration of Disease before Last Admission.*

PREVIOUS DURATION.	FIRST ADMISSION TO ANY HOSPITAL.			ALL OTHER ADMISSIONS.			TOTALS.		
	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.	Ma.	Fe.	Tot.
Congenital,	2	2	4	-	1	1	2	3	5
Under 1 month,	47	40	87	6	10	16	53	50	103
From 1 to 3 months, . . .	22	21	43	4	9	13	26	30	56
3 to 6 months,	12	15	27	2	3	5	14	18	32
6 to 12 months,	25	16	41	6	4	10	31	20	51
1 to 2 years,	11	10	21	6	2	8	17	12	29
2 to 5 years,	28	23	51	10	5	15	38	28	66
5 to 10 years,	12	12	24	5	9	14	17	21	38
10 to 20 years,	3	7	10	11	11	22	14	18	32
Over 20 years,	2	2	4	2	2	4	4	4	8
Unknown,	32	17	49	9	10	19	41	27	68
Total of cases,	196	165	361	61	66	127	257	231	488
Total of persons,	196	165	361	57	65	122	253	230	483
Average in years,	1.54	2.15	1.84	6.11	4.79	5.45	3.83	3.47	3.65

14. — Form of Mental Disease in Cases admitted or discharged, with Condition on Discharge — Concluded.

FORM OF DISEASE.	CASES ADMITTED.			CASES DISCHARGED.												AGGREGATE.											
	Males.	Females.	Totals.	RECOVERED.			MUCH IMPROVED.			IMPROVED.			NOT IMPROVED.			NOT INSANE.			DEATHS.			Totals.					
				Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.						
A. — Insane — <i>Concluded.</i>																											
Chinacetic melancholia,	2	7	9	6	1	7	2	1	3	3	1	1	2	3	1	1	2	2	1	4	5	4	10	4	14	26	
Katatonica (1st attack),	16	15	31	1	1	2	3	2	5	3	2	4	1	1	2	2	1	6	16	10	26	16	10	26	16	10	
Katatonica (2d attack),	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	34	66	100	34	66	
Katatonica (4th attack),	35	40	75	1	1	2	9	1	10	3	14	6	29	35	1	1	2	35	32	64	3	34	67	32	65		
Dementia præcox,	7	12	19	1	1	2	1	1	2	3	5	2	5	7	1	1	2	7	5	10	1	6	7	12	17		
Secondary dementia,	6	13	19	1	1	2	1	1	2	3	5	2	5	7	1	1	2	7	5	10	1	6	7	12	17		
Paranoid condition,	33	10	43	1	1	2	3	2	5	3	6	1	4	5	2	2	4	5	2	4	6	27	30	57	38	85	
General paralysis,	58	25	83	47	10	57	6	6	12	4	8	7	5	12	1	1	2	65	20	85	1	1	2	65	20		
Alcoholic insanity,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Cocainism,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Cocainism and alcoholism,	2	1	3	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Morphinism,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Toxic insanity,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Febrile delirium,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Delirium of inanition,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Delirium following pericarditis,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Dementia following typhoid fever,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Gastric psychosis,	3	1	4	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Tramatic insanity,	1	1	2	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2		
Huntington's chorea,	10	5	15	1	1	2	1	1	2	1	2	2	2	4	1	1	2	4	4	8	1	3	4	5	9		
Organic dementia,	2	1	3	1	1	2	1	1	2	1	2	1	1	2	1	1	2	2	1	2	3	1	2	3	4		
Presenile delirium,	21	14	35	1	1	2	1	1	2	1	2	1	1	2	1	1	2	3	11	9	20	11	9	20	32	8	
Senile dementia,	2	3	5	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	4	4	8	4	4	8	8	8	
Habitual drunkards,	2	2	4	1	1	2	1	1	2	1	2	1	1	2	1	1	2	1	4	4	8	4	4	8	8	8	
Not insane,	257	231	488	76	45	121	37	19	56	70	80	45	80	125	4	4	8	125	57	44	101	261	220	481	261	220	
Total of cases,	253	230	483	74	45	119	37	19	56	70	80	44	80	124	4	4	8	124	57	44	101	258	220	478	258	220	
Total of persons,																											

B. — Habitual drunkards,

15. — Discharges, classified by Admission and Result.

NUMBER OF THE ADMISSION.	RECOVERED.			MUCH IMPROVED.			IMPROVED.			NOT IMPROVED.			DIED.			NOT INSANE.			TOTALS.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
First,	65	37	102	29	14	43	30	27	57	38	68	106	52	43	95	2	3	5	216	192	408
Second,	9	4	13	6	1	7	9	1	10	5	10	15	5	-	5	2	1	3	36	17	53
Third,	1	1	2	1	3	4	2	-	2	2	2	4	-	1	1	-	-	-	6	7	13
Fourth,	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
Fifth,	1	1	2	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	2	1	3
Sixth,	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Seventh,	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total of cases,	76	45	121	37	19	56	42	28	70	45	80	125	57	44	101	4	4	8	261	220	481
Total of persons,	74	45	119	36	19	55	42	28	70	45	79	124	57	44	101	4	4	8	258	219	477

17. — Recoveries, classified by Duration of Disease and Treatment.

PERIOD.	LAST ATTACK.						ALL ATTACKS.					
	DURATION BEFORE ADMISSION.			HOSPITAL RESIDENCE.			WHOLE DURATION FROM THE ATTACK.			WHOLE KNOWN PERIOD OF MENTAL DISEASE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
A. Insane: —												
Under 1 month,	21	18	39	12	1	13	2	1	3	12	1	13
From 1 to 3 months,	13	9	22	28	14	42	9	4	13	25	12	37
3 to 6 months,	3	1	4	20	14	34	12	14	26	17	15	32
6 to 12 months,	6	1	7	13	10	23	11	8	19	17	7	24
1 to 2 years,	5	2	7	3	3	6	14	2	16	5	4	9
2 to 5 years,	6	2	8	—	—	—	6	3	9	12	3	15
5 to 10 years,	1	—	1	—	1	1	1	1	2	—	1	1
10 to 20 years,	1	—	1	—	—	—	1	—	1	—	—	—
Over 20 years,	—	—	—	—	—	—	—	—	—	—	—	—
Unknown,	20	10	30	—	—	—	20	10	30	22	11	33
Totals,	76	43	119	76	43	119	76	43	119	76	43	119
Average of known cases (in months),	12.	5.64	8.82	4.75	6.9	5.82	16.3	9.35	12.82	22.81	16.26	19.53
B. — Habitual drunkards: —												
From 1 to 3 months,	—	—	—	—	2	2	—	—	—	—	2	2
5 to 10 years,	—	1	1	—	—	—	—	1	1	—	—	—
Unknown,	—	1	1	—	—	—	—	1	1	—	—	—
Totals,	—	2	2	—	2	2	—	2	2	—	2	2
Average of known cases (in months),	—	96	96	—	2.5	2.5	—	98.75	98.75	—	2.5	2.5

18. — Deaths, classified by Duration of Disease and Treatment.

PERIOD.	LAST ATTACK.						ALL ATTACKS.					
	DURATION BEFORE ADMISSION.			HOSPITAL RESIDENCE.			WHOLE DURATION FROM THE ATTACK.			WHOLE KNOWN PERIOD OF MENTAL DISEASE.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Under 1 month,	8	6	14	9	4	13	1	1	2	1	4	13
From 1 to 3 months,	7	8	15	6	4	10	5	2	7	5	4	10
3 to 6 months,	1	2	3	10	13	23	1	5	6	1	13	21
6 to 12 months,	8	5	13	8	4	12	9	3	12	9	4	13
1 to 2 years,	3	2	5	13	10	23	5	7	12	5	9	22
2 to 5 years,	8	7	15	7	5	12	12	8	20	12	6	14
5 to 10 years,	3	3	6	3	4	7	5	5	10	5	4	7
10 to 20 years,	2	—	2	—	—	—	2	2	4	2	—	—
Over 20 years,	1	1	2	1	—	—	1	1	2	1	—	—
Unknown,	16	10	26	—	—	—	16	10	26	16	—	—
Totals,	57	44	101	57	44	101	57	44	101	57	44	101
Average of known cases (in months),	27.31	24.67	25.99	17.28	18.18	17.73	40.83	45.12	42.97	41.46	45.32	43.39
										17.89	18.63	18.26

[illegible]

1885,	.	.	.	12	16	28	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	43
1886,	.	.	.	12	12	24	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	23	
1887,	.	.	.	13	13	26	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	20	
1888,	.	.	.	6	10	16	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1889,	.	.	.	15	12	27	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1890,	.	.	.	19	19	38	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1891,	.	.	.	25	19	44	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1892,	.	.	.	30	14	44	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1893,	.	.	.	15	15	30	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2		
1894,	.	.	.	13	18	31	1	-	1	-	-	-	-	-	-	-	-	-	2	-	2		
1895,	.	.	.	12	11	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
1896,	.	.	.	12	22	34	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1		
1897,	.	.	.	12	14	26	2	2	4	-	-	-	-	-	-	-	-	-	2	-	2		
1898,	.	.	.	11	7	18	5	4	9	1	1	1	2	2	-	-	-	-	3	-	2		
Totals,	.	.	.	259	276	535	8	6	14	1	1	1	2	3	-	-	-	-	20	23	1		

LIST OF PERSONS

EMPLOYED IN THE WORCESTER LUNATIC HOSPITAL, SEPT. 30, 1898.

Superintendent and physician, per year,	.	.	.	.	.	\$3,000 00
Assistant superintendent and physician, per year,	.	.	.	.	.	1,500 00
Assistant physician,	"	"	.	.	.	1,500 00
Assistant physieian,	"	"	.	.	.	1,000 00
Assistant physicians (two),	"	"	.	.	.	900 00
Junior assistant physicians (four),	"	"	.	.	.	400 00
Steward,	"	"	.	.	.	1,200 00
Treasurer,	"	"	.	.	.	500 00
Auditor,	"	"	.	.	.	75 00
Matron,	"	"	.	.	.	600 00
Clerk,	"	"	.	.	.	720 00
Stenographers (three),			per month,			\$30 00 and 60 00
Supervisor (man),	"	"	.	.	.	45 00
Supervisor (woman),	"	"	.	.	.	30 00
Assistant supervisors (men, two) each,	"	"	.	.	.	35 00
Assistant supervisors (women, two) each,	"	"	.	.	.	25 00
Marker of clothing, etc.,	"	"	.	.	.	20 00
Seamstresses (two) each,	"	"	.	.	.	18 00
Attendants (men, forty-three),	"	"	.			\$23 00 to 28 00
Attendants (women, forty-five),	"	"	.			14 00 to 20 00
Night attendants (men, five),	"	"	.			25 00 to 28 00
Night attendants (women, six),	"	"	.	.	.	18 00
Baker,	"	"	.	.	.	50 00
Assistant baker,	"	"	.	.	.	27 00
Steward's assistant,	"	"	.	.	.	30 00
Office girl,	"	"	.	.	.	16 00

Kitchen men, per month,	.	.	.	.	.	.	\$25 00 and \$35 00
Cooks (two), “ “	.	.	.	.	.	.	25 00 and 28 00
Laundry man, “ “	.	.	.	.	.	.	30 00
Laundress, “ “	.	.	.	.	.	.	20 00
Assistant laundry man, per month,	.	.	.	.	.	.	27 00
Laundry girls (eight), “ “	.	.	.	.	.	.	\$14 00 to 18 00
Kitchen girls (four), “ “	.	.	.	.	.	.	14 00 to 16 00
House girls (nine) each, “ “	.	.	.	.	.	.	14 00
Carpenters (four), per day,	.	.	.	.	.	.	\$2 50 and 3 00
Painters (three), “ “	.	.	.	.	.	.	2 50 and 2 75
Mason, “ “	.	.	.	.	.	.	3 00
Helper, “ “	.	.	.	.	.	.	2 25
Plumber, per year,	.	.	.	.	.	.	900 00
Engineer, “ “	.	.	.	.	.	.	1,000 00
Firemen (two), “ month,	.	.	.	.	.	.	40 00
Farmer, “ “	.	.	.	.	.	.	60 00
Housekeeper, “ “	.	.	.	.	.	.	20 00
Farm laborers (fourteen), per month,	.	.	.	.	.	.	\$23 00 to 30 00
Farm help (women, four), “ “	.	.	.	.	.	.	14 00 to 18 00
Florist, “ “	.	.	.	.	.	.	45 00
Coachman, “ “	.	.	.	.	.	.	25 00
Expressman, “ “	.	.	.	.	.	.	25 00
Basement and yard man, “ “	.	.	.	.	.	.	25 00

PRODUCTS OF THE FARM

ON HAND OCT. 1, 1898, AND NOT DELIVERED AT THE HOSPITAL.

Apples,	105 barrels.
Beans, shell, Lima,	25 bushels.
Beets,	250 bushels.
Brussels sprouts,	25 bushels.
Cabbage,	15,000 heads.
Celery,	5,500 heads.
Egg plant,	200
Ensilage,	500 tons.
Hay,	425 tons.
Hay, swale,	30 tons.
Mangolds,	25 tons.
Oat fodder,	30 tons.
Onions,	475 bushels.
Parsley,	5 bushels.
Rye,	20 bushels.
Sage,	5 bushels.
Spinach,	100 bushels.
Squash,	48,800 pounds.
Straw rye,	6 tons.
Turnips,	2,400 bushels.
Tomatoes,	30 bushels.
Pop corn,	20 bushels.

FARM ACCOUNT.

DR.

Bread,	\$200 00
Butter,	680 54
Blacksmithing,	214 10
Groceries, etc.,	1,570 74
Meats,	1,711 51
Sugar,	336 59
Wages,	5,800 24
Live stock,	1,840 50
Grain and meal,	4,512 31
Light,	192 28
Fuel,	440 27
Water,	126 62
Pasturage,	120 00
Seeds,	53 95
Repairs,	144 88
Fertilizer,	370 00
Other current expenses,	730 39
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	\$19,044 92
Net gain for year ending Sept. 30, 1898,	1,599 17
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	\$20,644 09
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CR.

Apples, 35 barrels,	\$79 50
Asparagus, 34½ dozen bunches,	34 50
Bones,	51 00
Brussels sprouts, 6 bushels,	14 00
Beans, string, 92 bushels,	69 00
Beans, Lima, 24 bushels,	29 38
Beans, shell, 51 bushels,	51 00
Beets, 240 bushels,	128 75
Corn, 138 barrels,	207 00
Currants, 428 boxes,	42 80
Cabbage, 203 barrels,	233 25
Cash for live stock sold,	929 59
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Amount carried forward,	\$1,869 77

